



92979 SEQUENCE LISTING.ST25.TXT  
SEQUENCE LISTING

RECEIVED  
DEC 02 2003  
TECH CENTER 1600/2900

<110> Herzog, Herbert  
<120> NPY-Y7 Receptor Gene  
<130> 12020-0003  
<140> US 09/719,088  
<141> 2000-12-08  
<150> PCT/AU99/00523  
<151> 1999-06-29  
<150> AU PP4385  
<151> 1998-06-29  
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<170> PatentIn version 3.1  
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<213> NPY-Y7 N-terminal consensus sequence  
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<222> (2)..(3)  
<223> Xaa at position 2 is any amino acid; Xaa at position 3 is any amino acid  
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<222> (5)..(5)  
<223> Xaa at position 5 is any amino acid  
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<222> (10)..(10)  
<223> Xaa at position 10 is any amino acid

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Met Xaa Xaa Met Xaa Glu Lys Trp Asp Xaa Asn Ser Ser Glu  
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<210> 2  
<211> 408  
<212> PRT  
<213> Homo sapiens NPY-Y7 receptor

<400> 2

Met Phe Ile Met Asn Glu Lys Trp Asp Thr Asn Ser Ser Glu Asn Trp  
1 5 10 15

His Pro Ile Trp Asn Val Asn Asp Thr Lys His His Leu Tyr Ser Asp  
Page 1

20

Ile Asn Ile Thr Tyr Val Asn Tyr Tyr Leu His Gln Pro Gln Val Ala  
35 40 45

Ala Ile Phe Ile Ile Ser Tyr Phe Leu Ile Phe Phe Leu Cys Met Met  
50 55 60

Gly Asn Thr Val Val Cys Phe Ile Val Met Arg Asn Lys His Met His  
65 70 75 80

Thr Val Thr Asn Leu Phe Ile Leu Asn Leu Ala Ile Ser Asp Leu Leu  
85 90 95

Val Gly Ile Phe Cys Met Pro Ile Thr Leu Leu Asp Asn Ile Ile Ala  
100 105 110

Gly Trp Pro Phe Gly Asn Thr Met Cys Lys Ile Ser Gly Leu Val Gln  
115 120 125

Gly Ile Ser Val Ala Ala Ser Val Phe Thr Leu Val Ala Ile Ala Val  
130 135 140

Asp Arg Phe Gln Cys Val Val Tyr Pro Phe Lys Pro Lys Leu Thr Ile  
145 150 155 160

Lys Thr Ala Phe Val Ile Ile Met Ile Ile Trp Val Leu Ala Ile Thr  
165 170 175

Ile Met Ser Pro Ser Ala Val Met Leu His Val Gln Glu Glu Lys Tyr  
180 185 190

Tyr Arg Val Arg Leu Asn Ser Gln Asn Lys Thr Ser Pro Val Tyr Trp  
195 200 205

Cys Arg Glu Asp Trp Pro Asn Gln Glu Met Arg Lys Ile Tyr Thr Thr  
210 215 220

Val Leu Phe Ala Asn Ile Tyr Leu Ala Pro Leu Ser Leu Ile Val Ile  
225 230 235 240

Met Tyr Gly Arg Ile Gly Ile Ser Leu Phe Arg Ala Ala Val Pro His  
245 250 255

Thr Gly Arg Lys Asn Gln Glu Gln Trp His Val Val Ser Arg Lys Lys  
260 265 270

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Gln Lys Ile Ile Lys Met Leu Leu Ile Val Ala Leu Leu Phe Ile Leu  
275 280 285

Ser Trp Leu Pro Leu Trp Thr Leu Met Met Leu Ser Asp Tyr Ala Asp  
290 295 300

Leu Ser Pro Asn Glu Leu Gln Ile Ile Asn Ile Tyr Ile Tyr Pro Phe  
305 310 315 320

Ala His Trp Leu Ala Phe Gly Asn Ser Ser Val Asn Pro Ile Ile Tyr  
325 330 335

Gly Phe Phe Asn Glu Asn Phe Arg Arg Gly Phe Gln Glu Ala Phe Gln  
340 345 350

Leu Gln Leu Cys Gln Lys Arg Ala Lys Pro Met Glu Ala Tyr Thr Leu  
355 360 365

Lys Ala Lys Ser His Val Leu Ile Asn Thr Ser Asn Gln Leu Val Gln  
370 375 380

Glu Ser Thr Phe Gln Asn Pro His Gly Glu Thr Leu Leu Tyr Arg Lys  
385 390 395 400

Ser Ala Glu Asn Pro Asn Arg Asn  
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<210> 3  
<211> 405  
<212> PRT  
<213> Mus musculus NPY-Y7 receptor

<400> 3

Met Ser Thr Met Ser Glu Lys Trp Asp Ser Asn Ser Ser Glu Ser Trp  
1 5 10 15

Asn His Ile Trp Ser Gly Asn Asp Thr Gln His His Trp Tyr Ser Asp  
20 25 30

Ile Asn Ile Thr Tyr Val Asn Tyr Tyr Leu His Gln Pro Gln Val Ala  
35 40 45

Ala Val Phe Ile Ser Ser Tyr Leu Leu Ile Phe Val Leu Cys Met Val  
50 55 60

Gly Asn Thr Val Val Cys Phe Ile Val Ile Arg Asn Arg His Met His  
65 70 75 80

## 92979 SEQUENCE LISTING.ST25.TXT

Thr Val Thr Asn Phe Leu Ile Leu Asn Leu Ala Ile Ser Asp Leu Leu  
 85 90 95  
 Val Gly Ile Phe Cys Met Pro Ile Thr Leu Leu Asp Asn Ile Ile Ala  
 100 105 110  
 Gly Trp Pro Phe Gly Ser Ser Met Cys Lys Ile Ser Gly Leu Val Gln  
 115 120 125  
 Gly Ile Ser Val Ala Ala Ser Val Phe Thr Leu Val Ala Ile Ala Val  
 130 135 140  
 Asp Arg Phe Arg Cys Val Val Tyr Pro Phe Lys Pro Lys Leu Thr Val  
 145 150 155 160  
 Lys Thr Ala Phe Val Thr Ile Val Ile Ile Trp Gly Leu Ala Ile Ala  
 165 170 175  
 Ile Met Thr Pro Ser Ala Ile Met Leu His Val Gln Glu Glu Lys Tyr  
 180 185 190  
 Tyr Arg Val Arg Leu Ser Ser His Asn Lys Thr Ser Thr Val Tyr Trp  
 195 200 205  
 Cys Arg Glu Asp Trp Pro Arg His Glu Met Arg Arg Ile Tyr Thr Thr  
 210 215 220  
 Val Leu Phe Ala Ile Ile Tyr Leu Ala Pro Leu Ser Leu Ile Val Ile  
 225 230 235 240  
 Met Tyr Ala Arg Ile Gly Ala Ser Leu Phe Lys Thr Ala Ala His Cys  
 245 250 255  
 Thr Gly Lys Gln Arg Pro Val Gln Cys Met Tyr Gln Glu Lys Gln Lys  
 260 265 270  
 Val Ile Lys Met Leu Leu Thr Val Ala Leu Leu Phe Ile Leu Ser Trp  
 275 280 285  
 Leu Pro Leu Trp Thr Leu Met Met Leu Ser Asp Tyr Thr Asp Leu Ser  
 290 295 300  
 Pro Asn Lys Leu Arg Ile Ile Asn Ile Tyr Ile Tyr Pro Phe Ala His  
 305 310 315 320  
 Trp Leu Ala Phe Cys Asn Ser Ser Val Asn Pro Ile Ile Tyr Gly Phe  
 325 330 335

## 92979 SEQUENCE LISTING.ST25.TXT

Phe Asn Glu Asn Phe Arg Asn Gly Phe Gln Asp Ala Phe Gln Ile Cys  
 340 345 350

Gln Lys Lys Ala Lys Pro Gln Glu Ala Tyr Ser Leu Arg Ala Lys Arg  
 355 360 365

Asn Ile Val Ile Asn Thr Ser Gly Leu Leu Val Gln Glu Pro Val Ser  
 370 375 380

Gln Asn Pro Gly Gly Glu Asn Leu Gly Cys Gly Lys Ser Ala Asp Asn  
 385 390 395 400

Pro His Arg Asn Pro  
 405

<210> 4  
 <211> 1903  
 <212> DNA  
 <213> Homo sapiens NPY-Y7-encoding gene

<400> 4  
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 cacgcctggc taattttttt gtatttttag tagggacggc gtttactgt gttagccaga 120  
 tgggtctccat ctcccgacct cgtgatccac ccacctcggc ctcccaaagt gctgggatta 180  
 caggcgtgag accgcgcccc gccaatctcc tttcttagtt gcctctgccc acctcttctc 240  
 ttctgcttcc atattacagg tttcctcagt tgcgaaatta ggatgttaat tatagctttt 300  
 gacatacaag aaacatcaaa aagattgaat gtcttaataa gagtgaagca tgtagatcag 360  
 tgactgctat gttcatcatg aatgagaaat gggacacaaa ctcttcagaa aactggcatc 420  
 ccatctggaa tgtcaatgac acaaagcatc atctgtactc agatattaat attacctatg 480  
 tgaactacta tcttcaccag cctcaagtgg cagcaatctt cattatttcc tactttctga 540  
 tcttcttttt gtgcatgatg ggaaatactg tggtttgctt tattgtaatg aggaacaaac 600  
 atatgcacac agtcactaat ctcttcatct taaacctggc cataagtgat ttactagttg 660  
 gcatattctg catgcctata aactgctgg acaatattat agcaggatgg ccatttggaa 720  
 acacgatgtg caagatcagt ggattgggtc agggaatatc tgtcgcagct tcagtcttta 780  
 cgtttagttgc aattgctgta gataggttcc agtgtgtggt ctaccctttt aaaccaaagc 840  
 tcactatcaa gacagcgttt gtcattatta tgatcatctg ggtcctagcc atcaccatta 900  
 tgtctccatc tgcagtaatg ttacatgtgc aagaagaaaa atattaccga gtgagactca 960  
 actcccagaa taaaaccagt ccagtctact ggtgccggga agactggcca aatcaggaaa 1020  
 tgaggaagat ctacaccact gtgctgtttg ccaacatcta cctggctccc ctctccctca 1080

## 92979 SEQUENCE LISTING.ST25.TXT

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tgctcctgat tgtggccctg ctttttattc tctcatggct gcccctgtgg actctaata	1260
tgctctcaga ctacgctgac ctttctccaa atgaactgca gatcatcaac atctacatct	1320
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tcttcaacga gaatttccgc cgtgggttcc aagaagcttt ccagctccag ctctgccaaa	1440
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ataggaaaag tgctgaaaac cccaacagga attagtgtg gaagaattaa aagaaactac	1620
taacagcagt gagatttaaa aagagctagt gtgataatcc taactctact acgcattata	1680
tatttaaatc cattgctttt tgtggctttg cacttcaa atttcaaaga atgttctaaa	1740
taaaacattt actgaaagcc ctctctggca aaaaaattaa aaataaaca aaatgggtcat	1800
aagatcataa acaatcttat gttgtataaa aatacgtaga gtgacttaga catgtttgca	1860
tgaataaata ttttctaga gaacagttaa aaaaaaaaaa aaa	1903

&lt;210&gt; 5

&lt;211&gt; 1228

&lt;212&gt; DNA

&lt;213&gt; Mus musculus NPY-Y7-encoding gene

&lt;400&gt; 5

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agtggcaatg atacacagca tcttggtat tcagatatca acattaccta tgtgaactac	120
tatctccacc agccccaagt ggcagctgtc ttcacagct cctacctct gatctttgtc	180
ttgtgcatgg tgggaaatac tgtcgtttgc tttattgtga taaggaatag acacatgcac	240
acagtcacta atttcttgat cttaaaccct gccataagt atttactgg tggaaatttc	300
tgtatgccta tcacattgct ggacaacatc atagcaggat ggccattcgg aagcagcatg	360
tgcaagatca gtgggctggg gcaaggata tcagttgcgg cttccgtctt caccttggtt	420
gcaatagctg tggacagatt ccgctgtgtg gtctaccct ttaagccaaa gctcactgtc	480
aagacagcct ttgtcacgat tgtgatcatc tggggcctgg ccatcgccat tatgactcca	540
tctgcaataa tgttacatgt acaagaagaa aaatactacc gtgtgagact cagctccac	600
aataaaacca gcacagtcta ctggtgtcgg gaggactggc caagacacga aatgaggagg	660
atctatacca cgggtgtatt tgccatcatc tatcttgctc ctctctcact cattgttatc	720
atgtatgcaa ggattggggc ttccctcttc aagacggcag cactcgcac aggcaagcag	780
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 tggctcgcct tctgcaacag cagtgtcaac cctattattt atggattcct taatgaaaat 1020  
 tttcgcaatg gtttccaaga tgctttccag atctgccaaa agaaagccaa gccccaggaa 1080  
 gcctattccc tgagagcgaa acgcaacata gtcataaaca catcgggcct gctgggtgcag 1140  
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<400> 6

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Asn Phe Ser Glu Lys Asn Ala Gln Leu Leu Ala Phe Glu Asn Asp Asp  
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Cys His Leu Pro Leu Ala Met Ile Phe Thr Leu Ala Leu Ala Tyr Gly  
 35 40 45

Ala Val Ile Ile Leu Gly Val Ser Gly Asn Leu Ala Leu Ile Ile Ile  
 50 55 60

Ile Leu Lys Gln Lys Glu Met Arg Asn Val Thr Asn Ile Leu Ile Val  
 65 70 75 80

Asn Leu Ser Phe Ser Asp Leu Leu Val Ala Ile Met Cys Leu Pro Phe  
 85 90 95

Thr Phe Val Tyr Thr Leu Met Asp His Trp Val Phe Gly Glu Ala Met  
 100 105 110

Cys Lys Leu Asn Pro Phe Val Gln Cys Val Ser Ile Thr Val Ser Ile  
 115 120 125

Phe Ser Leu Val Leu Ile Ala Val Glu Arg His Gln Leu Ile Ile Asn  
 130 135 140

Pro Arg Gly Trp Arg Pro Asn Asn Arg His Ala Tyr Val Gly Ile Ala  
 145 150 155 160

Val Ile Trp Val Leu Ala Val Ala Ser Ser Leu Pro Phe Leu Ile Tyr

## 92979 SEQUENCE LISTING.ST25.TXT

165

170

175

Gln Val Met Thr Asp Glu Pro Phe Gln Asn Val Thr Leu Asp Ala Tyr  
 180 185 190  
 Lys Asp Lys Tyr Val Cys Phe Asp Gln Phe Pro Ser Asp Ser His Arg  
 195 200 205  
 Leu Ser Tyr Thr Thr Leu Leu Leu Val Leu Gln Tyr Phe Gly Pro Leu  
 210 215 220  
 Cys Phe Ile Phe Ile Cys Tyr Phe Lys Ile Tyr Ile Arg Leu Lys Arg  
 225 230 235 240  
 Arg Asn Asn Met Met Asp Lys Met Arg Asp Asn Lys Tyr Arg Ser Ser  
 245 250 255  
 Glu Thr Lys Arg Ile Asn Ile Met Leu Leu Ser Ile Val Val Ala Phe  
 260 265 270  
 Ala Val Cys Trp Leu Pro Leu Thr Ile Phe Asn Thr Val Phe Asp Trp  
 275 280 285  
 Asn His Gln Ile Ile Ala Thr Cys Asn His Asn Leu Leu Phe Leu Leu  
 290 295 300  
 Cys His Leu Thr Ala Met Ile Ser Thr Cys Val Asn Pro Ile Phe Tyr  
 305 310 315 320  
 Gly Phe Leu Asn Lys Asn Phe Gln Arg Asp Leu Gln Phe Phe Phe Asn  
 325 330 335  
 Phe Cys Asp Phe Arg Ser Arg Asp Asp Tyr Glu Thr Ile Ala Met  
 340 345 350  
 Ser Thr Met His Thr Asp Val Ser Lys Thr Ser Leu Lys Gln Ala Ser  
 355 360 365  
 Pro Val Ala Phe Lys Lys Ile Asn Asn Asn Asp Asp Asn Glu Lys Ile  
 370 375 380

&lt;210&gt; 7

&lt;211&gt; 381

&lt;212&gt; PRT

&lt;213&gt; human NPY-Y2 protein

&lt;400&gt; 7

Met Gly Pro Ile Gly Ala Glu Ala Asp Glu Asn Gln Thr Val Glu Glu  
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## 92979 SEQUENCE LISTING.ST25.TXT

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 Met Lys Val Glu Gln Tyr Gly Pro Gln Thr Thr Pro Arg Gly Glu Leu  
                     20                      25                      30  
 Val Pro Asp Pro Glu Pro Glu Leu Ile Asp Ser Thr Lys Leu Ile Glu  
                     35                      40                      45  
 Val Gln Val Val Leu Ile Leu Ala Tyr Cys Ser Ile Ile Leu Leu Gly  
                     50                      55                      60  
 Val Ile Gly Asn Ser Leu Val Ile His Val Val Ile Lys Phe Lys Ser  
                     65                      70                      75                      80  
 Met Arg Thr Val Thr Asn Phe Phe Ile Ala Asn Leu Ala Val Ala Asp  
                     85                      90                      95  
 Leu Leu Val Asn Thr Leu Cys Leu Pro Phe Thr Leu Thr Tyr Thr Leu  
                     100                      105                      110  
 Met Gly Glu Trp Lys Met Gly Pro Val Leu Cys His Leu Val Pro Tyr  
                     115                      120                      125  
 Ala Gln Gly Leu Ala Val Gln Val Ser Thr Ile Thr Leu Thr Val Ile  
                     130                      135                      140  
 Ala Leu Asp Arg His Arg Cys Ile Val Tyr His Leu Glu Ser Lys Ile  
                     145                      150                      155                      160  
 Ser Lys Arg Ile Ser Phe Leu Ile Ile Gly Leu Ala Trp Gly Ile Ser  
                     165                      170                      175  
 Ala Leu Leu Ala Ser Pro Leu Ala Ile Phe Arg Glu Tyr Ser Leu Ile  
                     180                      185                      190  
 Glu Ile Ile Pro Asp Phe Glu Ile Val Ala Cys Thr Glu Lys Trp Pro  
                     195                      200                      205  
 Gly Glu Glu Lys Ser Ile Tyr Gly Thr Val Tyr Ser Leu Ser Ser Leu  
                     210                      215                      220  
 Leu Ile Leu Tyr Val Leu Pro Leu Gly Ile Ile Ser Phe Ser Tyr Thr  
                     225                      230                      235                      240  
 Arg Ile Trp Ser Lys Leu Lys Asn His Val Ser Pro Gly Ala Ala Asn  
                     245                      250                      255

92979 SEQUENCE LISTING.ST25.TXT

Asp His Tyr His Gln Arg Arg Gln Lys Thr Thr Lys Met Leu Val Cys  
 260 265 270

Val Val Val Val Phe Ala Val Ser Trp Leu Pro Leu His Ala Phe Gln  
 275 280 285

Leu Ala Val Asp Ile Asp Ser Gln Val Leu Asp Leu Lys Glu Tyr Lys  
 290 295 300

Leu Ile Phe Thr Val Phe His Ile Ile Ala Met Cys Ser Thr Phe Ala  
 305 310 315 320

Asn Pro Leu Leu Tyr Gly Trp Met Asn Ser Asn Tyr Arg Lys Ala Phe  
 325 330 335

Leu Ser Ala Phe Arg Cys Glu Gln Arg Leu Asp Ala Ile His Ser Glu  
 340 345 350

Val Ser Val Thr Phe Lys Ala Lys Lys Asn Leu Glu Val Arg Lys Asn  
 355 360 365

Ser Gly Pro Asn Asp Ser Phe Thr Glu Ala Thr Asn Val  
 370 375 380

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 <212> DNA  
 <213> primer hy7-A

<400> 8  
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18

<210> 9  
 <211> 18  
 <212> DNA  
 <213> primer hy7-B

<400> 9  
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18